

## RESEARCH REPORT DOCUMENTATION PAGE

1. Report No. ND 2000-01	2. Report Date February 2003	3. Contract No. N/A	4. Project No. IM-8-029(026)053
5. Title and Subtitle  Six – Cell Seal Delastic® Sealer		6. Report Type  Click on link to open report  Work Plan <input type="checkbox"/> Construction <input type="checkbox"/> Evaluation <input checked="" type="checkbox"/> Final <input type="checkbox"/>	7. Project No. IM-5-094(018)059
			8. Project No.
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11. Author(s)/Principle Investigator(s) Kyle Evert			
12. Performing Organization Name and Address  NDDOT M+R <input checked="" type="checkbox"/> North Dakota DOT NDDOT OTHER* <input type="checkbox"/> Materials and Research Division NDSU <input type="checkbox"/> 300 Airport Road UND <input type="checkbox"/> Bismarck ND 58504-6005 UGPTI <input type="checkbox"/> OTHER* <input type="checkbox"/> *see supplementary notes		13. Sponsoring Agency Name and Address  North Dakota DOT Materials and Research Division 300 Airport Road Bismarck ND 58504-6005	
14. Supplementary Notes			
15. Abstract <u>Purpose and Need</u> The purpose of this project is to prevent water and incompressibles from entering the joints of concrete pavements. When water enters a joint it may cause damage to the base below the concrete pavement due to freeze thaw cycles. Incompressibles may get lodged between the joints removing the space for thermal expansion. This is the rationale to use a joint sealant for concrete pavement.  <u>Objective</u> To determine the effectiveness of <b>DELASTIC® SIX - CELL SEALANT</b> as a means of preventing debris from infiltrating the joints on concrete pavements.  <u>Scope</u> The <b>DELASTIC® SIX - CELL SEALANT</b> will be placed in several transverse joints of Interstate 29 and Interstate 94. These joints will then be evaluated annually to determine the effectiveness and durability of <b>DELASTIC® SIX - CELL SEALANT</b> . This project will be evaluated yearly for 5 years.  <u>Summary</u> The sealants appear to be having a problem with becoming depressed into the joint. The number of depressing sealants is increasing in both sections. The sealants on I-29 appeared to be in better condition than the I-94 sealants. The I-29 project has three joints depressed, which has increased by two since the previous year. The I-94 project has eight joints depressed, which has increased by five since the previous year.  The rest of the distresses that have been evaluated, such as spalling of joints, six-cell seals twisting, and incompressibles confined in the joint, have not changed much since the last evaluation. The number of joints on I-94 with incompressibles confined in the joint has decreased since the last evaluation. The number of spalls on the I-29 project has increased to three spalls from one spall the previous evaluation. The I-94 project does not have any new spalls. It appears the sealants are performing well except for the tendency of the sealant to depress in the joint. The sealants are only three years old and some minor problems are developing.			
16. Key Words Joint Sealer Concrete Drainable Base Transverse Joints Six Cell Sealant Delastic®Sealer	17. Distribution Statement No restrictions. This document is available to the public from:  North Dakota Department of Transportation Materials and Research Division: 300 Airport Road Bismarck ND 58504-6005 Office: (701) 328-6900 Fax: (701) 328-0310		18. No. of Pages 32  19. File type/Size  PDF/ 2.1 mb